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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,456	11/08/2001	Ki-Bong Song	1293.1247	5062
21171	7590	04/13/2004	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			HUBER, PAUL W	
			ART UNIT	PAPER NUMBER
			2653	

DATE MAILED: 04/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/986,456

Applicant(s)

SONG

Examiner

Paul Huber

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art of figure 3, as disclosed by the applicant in the specification, considered with Park (Korea-2000-46141)

The admitted prior art figure 3, as disclosed by the applicant, teaches a near field optical head for use with a recording medium 1, comprising: a light unit which radiates light having a predetermined wavelength at the recording medium 1; and a slider 5 which is raised about the recording medium 1 by dynamic air pressure attendant upon the rotation of the recording medium 1, the slider 5 comprising an optical waveguide probe 30. The probe 30 includes an optical waveguide installed at the slider 5 and having an end facing the recording medium 1, the optical waveguide transmitting the light from the light unit to the recording medium 1. However, the admitted prior art figure 3 fails to specifically teach that the optical waveguide probe further includes a self focusing layer formed of a nonlinear optical material for condensing the light incident from the optical waveguide to form a light spot on the recording medium for recording and reproduction purposes.

Park discloses a near field optical head including a waveguide probe (see figure 4, for example) which includes a self focusing layer formed of a nonlinear optical material for condensing the light incident from the optical waveguide to form a light spot on the recording medium, in the same field of endeavor, for the purpose of recording and reproducing information from an optical disc. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the admitted prior art of figure 3 such that the optical waveguide probe 30 further includes a self focusing layer formed of a nonlinear optical material, installed at the end of the optical waveguide facing the recording medium 1, for condensing the light incident from the optical waveguide to form a light spot on the recording medium as taught by Park. A practitioner in the art would have been motivated to do this for

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the purpose of recording and reproducing information from the recording medium 1 with a "laser beam [which] can be focused so as to increase near-field generation efficiency" (see abstract).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:


**A person shall be entitled to a patent unless –**

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Park.

Park discloses a near field recording/reproducing optical head for use with a recording medium. See figure 4 for example. A light unit radiates and detects light of a predetermined wavelength to and from the recording medium. An optical waveguide having a first surface to receive the radiated light and a second surface to receive the light from the recording medium, the optical waveguide transmitting the radiated light and the light from the recording medium between the first and second ends. A self focusing layer of a nonlinear optical material is formed at the second surface of the optical waveguide, to condense the radiated light to form a spot on the recording medium. See abstract.

Any inquiry concerning this communication should be directed to Paul Huber at telephone number 703-308-1549.

  
Paul Huber  
Primary Examiner  
Art Unit 2653